

WHAT IS CLAIMED IS:

1. In a network for distributing packetized information, said network including a plurality of nodes coupled to one
5 another through a pair of communication paths having the form of rings, where data traffic on a first ring flows in an opposite direction to data traffic on a second ring, wherein each of said nodes comprises a ring terminal, a method of routing packet traffic at a first node of said
10 plurality of nodes, comprising:
 - receiving over said first ring, a first data packet stream at a first transmission link interface of said ring terminal associated with said first node;
 - extracting, at a first filter coupled to said first
15 transmission link interface, packets destined for said first node;
 - inserting, at said first filter, null packets as replacement packets of said extracted packets;
 - forwarding said extracted packets to control and
20 switching circuitry coupled to said first filter;
 - injecting, at a first packet injector coupled to said control and switching circuitry, packets associated with a second node to form a second data packet stream;
 - sending, to a second transmission link interface
25 associated with said first ring, said second data packet stream;
 - receiving over said second ring, a third data packet stream at a third transmission link interface of said ring terminal associated with said first node;
 - 30 extracting, at a second filter coupled to said third transmission link interface, packets destined for said first node;
 - inserting, at said second filter, null packets as replacement packets of said extracted packets;
 - 35 forwarding said extracted packets to control and switching circuitry coupled to said second filter;

injecting, at a second packet injector coupled to said control and switching circuitry, packets associated with a third node to form a fourth data packet stream;

5 sending, to a fourth transmission link interface associated with said second ring, said fourth data packet stream.

2. The method of claim 1, wherein said packet injectors replace said inserted null packets with packets associated
10 with a different node.

3. The method of claim 1, further comprising forwarding said second and fourth data streams over said first and second rings respectively from said second and fourth
15 transmission link interfaces.

4. The method of claim 1, further comprising:
detecting, at said control and switching circuitry, transmission link failures; and
20 rerouting traffic upon detection of a failure.

5. The method of claim 4, wherein in an instance of a failure occurring at said second transmission link interface associated with said first ring, said first data
25 stream is routed to said fourth transmission link interface associated with said second ring.

6. The method of claim 5, wherein said second packet injector injects packets associated with said second node
30 to form said second data packet stream.

7. The method of claim 4, wherein in an instance of a failure occurring at said fourth transmission link interface associated with said second ring, said third data
35 stream is routed to said second transmission link interface associated with said first ring.

8. The method of claim 7, wherein said first packet injector injects packets associated with said third node to form said fourth data packet stream.